## Abstract

A battery separator for a lithium-ion secondary battery is a microporous membrane with an adjuvant. The microporous membrane is made of a thermoplastic, and has a thickness of 25  $\mu$ m or less. The adjuvant, in an effective amount, is mixed into the membrane or coated thereon. The adjuvant is a material adapted to reduce or eliminate energy concentrations around the separator. The energy concentration is sufficient to initiate a reaction of the components of the lithium ion secondary battery.

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